Making the Case for Dental Coverage for Adults in All State Medicaid Programs

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Key Messages

- *Oral health is essential for overall health. Providing adult dental coverage through Medicaid improves access to and utilization of dental care among low-income adults and has the power to reduce racial disparities, advance health equity, and lower medical care costs.*
- *We estimate the cost of implementing extensive dental coverage for adults in all state Medicaid programs that do not provide such coverage. We estimate increased spending on dental care as well as medical care cost savings stemming from improved oral health.*
- *Federal and state policymakers have various levers to promote oral health equity across the nation, including designating dental services as a mandatory benefit category for adults, establishing a baseline of comprehensiveness for adult dental services in Medicaid, and bolstering state budgets to ensure adequate funding for successful implementation.*

Introduction

Oral health is essential for overall health and wellness. Oral health is linked with systemic health conditions and diseases as well as employment opportunities, economic stability, and social connectedness. One cannot be healthy without a healthy mouth. Yet millions of adults in America – particularly low-income adults – cannot afford the oral health care they need to stay healthy, eat, work, socialize, and live pain free. Part of this disparity is driven by gaps in dental coverage in federal and state policy, particularly dental coverage for adults enrolled in Medicaid.

As the nation recovers from the COVID-19 pandemic and economic downturn, oral health coverage is a critical gap in our health care system. For adults who rely on Medicaid, being able to afford oral health care could be the key to recovering their health or getting a new job. Yet millions of adults are left without oral health coverage, exacerbating health inequities. Notably, the people most likely to get sick and lose jobs during the pandemic are

also the people who face the biggest barriers to oral health. People of color, tribal communities, older adults, and people with disabilities are among those who would most benefit from improved oral health coverage in Medicaid.

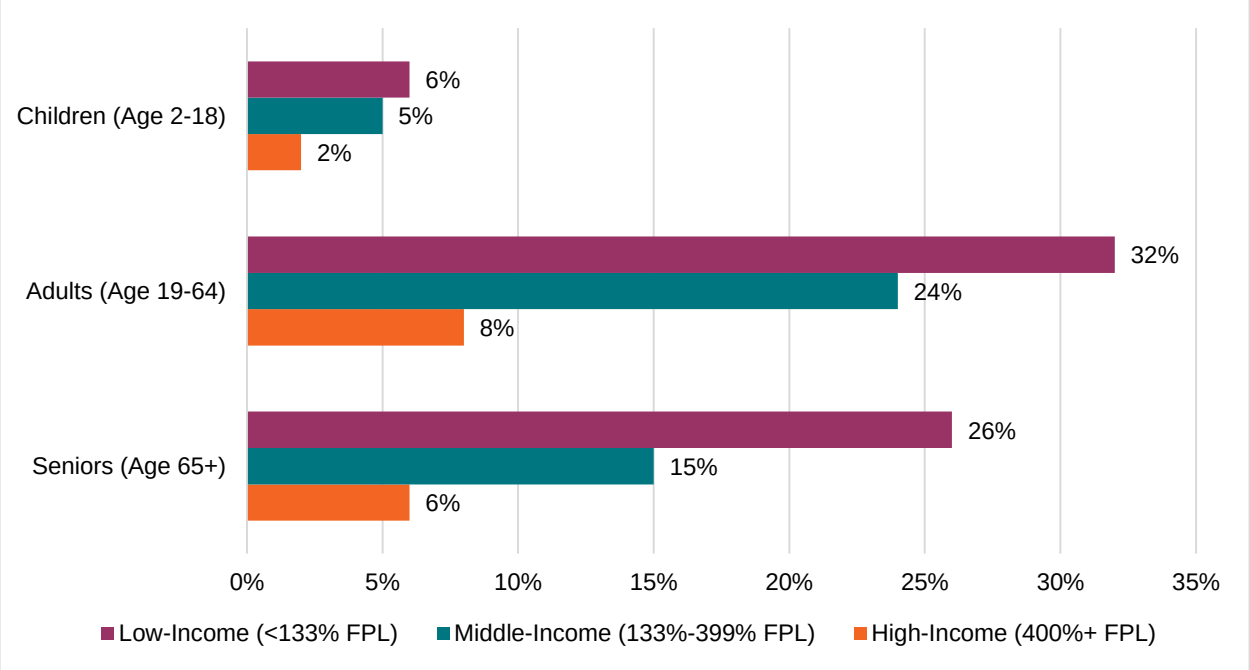
In this brief, we review data on barriers to dental care for low-income adults and the current landscape of dental coverage for Medicaid-enrolled adults. The data convincingly show that providing comprehensive dental coverage for Medicaid-enrolled adults is a major driver of access to dental care and improved oral health. We then estimate the fiscal impact of implementing comprehensive dental coverage for adults in the 28 state Medicaid programs that currently do not provide such coverage. Our analysis includes estimates of how many more adults would seek dental care and the associated dental care costs as well as medical care cost savings stemming from improved oral health for those with chronic conditions like diabetes and heart disease. We also discuss federal policy options to ensure that all states offer adequate adult dental coverage in Medicaid that could reduce cost barriers and improve access to dental care for adults across the United States.

Financial Barriers to Dental Care by Income, Age, and Race

Dental care has the highest level of financial barriers compared to any other health care service.[1] Financial factors such as lack of insurance and cost being too high are much more limiting to dental care access than non-financial factors (e.g., fear of dentist, difficulty finding an appointment time).[2] This is true for all age groups and income levels. But the data clearly show that out of any age group and income group, low-income adults face the most significant cost barriers to dental care.

Figure 1 summarizes the latest available data on cost barriers to dental care. Within any particular income group, adults consistently face higher cost barriers to dental care than children or seniors. Children have, by far, the lowest levels of cost barriers to dental care. Further, within any particular age group, there is a significant income gradient in cost barriers to dental care. Low-income adults face the most significant cost barriers to dental care out of any age and income group.

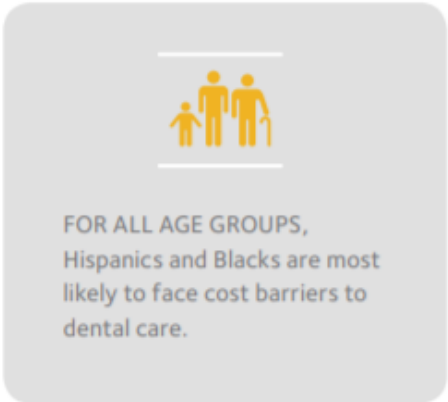
Figure 1: Prevalence of Cost Barriers to Dental Care by Age and Income Level



Source: Health Policy Institute analysis of National Health Interview Survey data for 2019. **Note:** Percentages indicate those who needed dental care but did not obtain it in the past 12 months due to cost. FPL: federal poverty level.

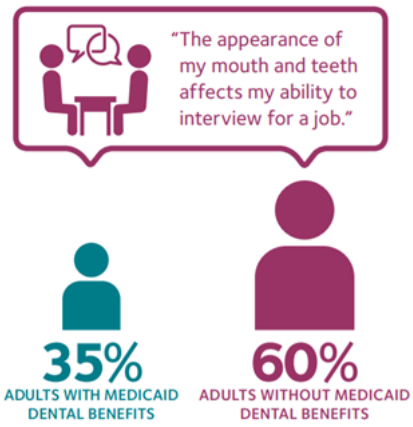
Financial barriers to dental care for low-income adults have consequences. Low-income adults are least likely to access dental care, including basic preventive services.[3] Low-income adults are more likely than their higher income peers to experience dental pain, to report a poor overall condition of their mouth and teeth, and to find life in general to be less satisfying due to the condition of their mouth and teeth.[4] Further, poor oral health also has economic consequences for low-income adults. Research indicates that nearly 30 percent of low-income adults in the U.S. indicate that the condition of their mouth and teeth limits their ability to interview for a job.[4]

There are also racial and ethnic disparities in oral health care access that are important to highlight. Black and Hispanic adults are more likely to face cost barriers to dental care than White adults, and this gap has been increasing over time.[5] Among children, cost barriers to dental care have been narrowing across all racial and ethnic categories. Black and Hispanic adults are also less likely to have had a dental visit compared to their White and Asian peers. Racial and ethnic disparities in dental care utilization among children have been decreasing.[6]



The Impact of Medicaid Adult Dental Coverage on Access to Care, Health Care Costs, and Employability

There is a clear link between Medicaid policy on dental coverage for adults and cost barriers to dental care, dental care utilization, oral health status, and employability. A recent study concluded that when adults gain dental coverage through Medicaid, they report improved oral health and employability.[7] These outcomes were most pronounced among Black Medicaid enrollees and those who had gone without dental coverage for more than a year, suggesting that dental coverage has the potential to reduce income and race-based inequities in the oral health care delivery system. Studies show that providing dental coverage to adults in Medicaid programs significantly increases access to and utilization of dental care.[8] There are spillover effects for children, as children who reside in states that provide Medicaid adult dental coverage to their parents are more likely to have had a dental visit in the past year and less likely to have deferred dental care.[9]



There are economic benefits to adult dental coverage in Medicaid. Among Medicaid-enrolled adults in states that do not provide dental coverage to adults in their Medicaid program, 60 percent reported that the appearance of their mouth and teeth affects their ability to interview for a job.[10] For those in states with dental coverage for adults, it was much lower, at 35 percent.[10] More broadly, improved oral health could broaden employment prospects and promote economic activity in the community.[11,12,13]

Expanded dental coverage can reduce overall medical costs. Studies have repeatedly shown that dental coverage significantly reduces costly emergency department visits for dental conditions.[14,15] These cost savings are realized by diverting care from hospital emergency departments to more cost-effective settings like a dental office or community health center. This diversion can also lead to better oral health outcomes because patients will get more clinically appropriate treatment for dental conditions by dental professionals. There is also emerging evidence that increased access to dental care can lead to lower medical care costs among patients who are pregnant or who have chronic conditions such as diabetes and heart disease.[16,17]

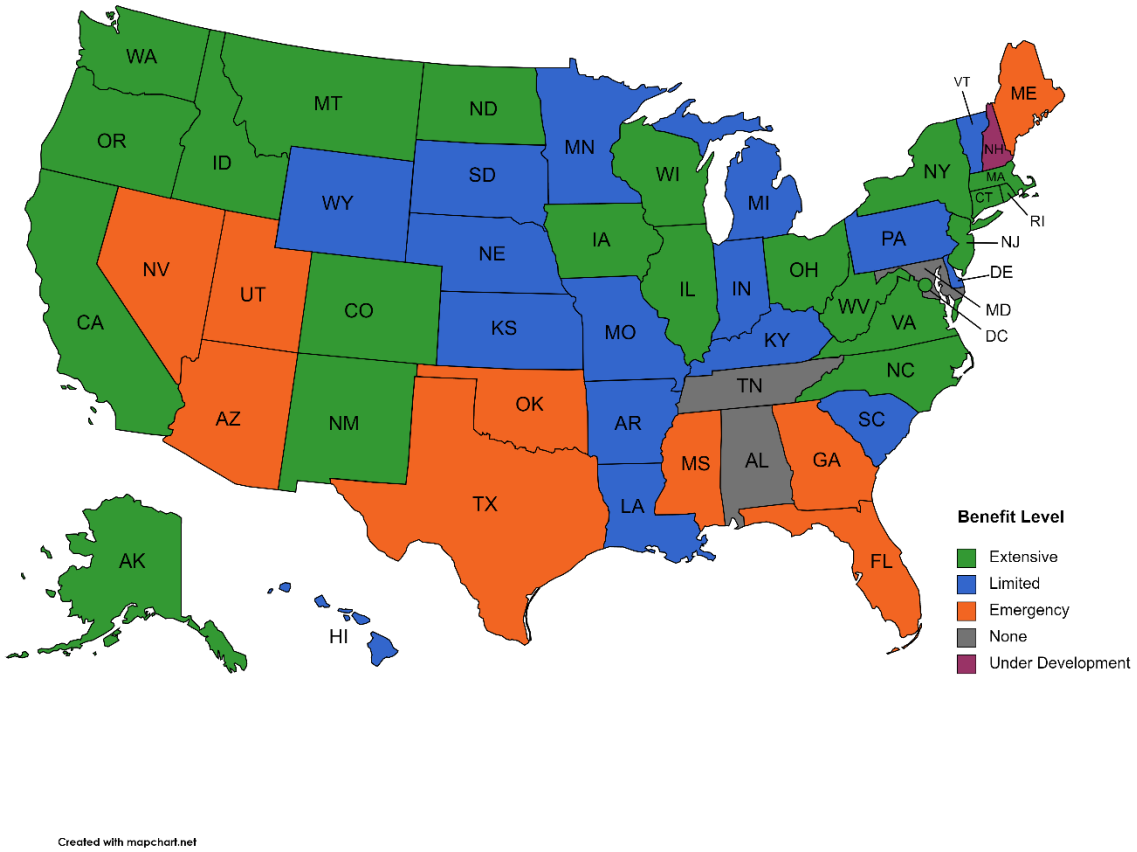
The Current Landscape of Adult Dental Coverage within State Medicaid Programs

Despite the overwhelming evidence of major costs barriers to dental care among low-income adults and the importance of coverage in alleviating cost barriers, many states still do not provide adequate Medicaid adult dental benefits. As of early 2021, 21 states and the District of Columbia provide extensive adult dental benefits in their Medicaid programs. Sixteen states provide limited benefits, nine provide emergency-only benefits, three provide no benefits, and one has a dental benefit under development.[18] (Figure 2).

All states are required to comply with the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit to provide preventive and medically necessary comprehensive health care services for children under age 21 enrolled in Medicaid and the Children's Health Insurance Program (CHIP), including dental care.[19] EPSDT offers a crucial guide to states in

the design of dental benefits packages for children: a minimally acceptable set of services at its worst and a north star of comprehensive, timely, individualized dental care at its best – while still allowing flexibility to align with the needs, resources, and capacities of each individual state. There is no corresponding dental care requirement for adult Medicaid enrollees; adult dental coverage is optional under state Medicaid programs.[20] When a Medicaid-enrolled child enters adulthood, their medical coverage transitions relatively seamlessly. This does not hold true for dental care. In many states, dental coverage is abruptly curtailed or taken away entirely from Medicaid enrollees at the arbitrary age of 21.

Figure 2: Adult Medicaid Dental Benefit Level by State



Source: Health Policy Institute analysis of data from Center for Health Care Strategies, Inc.[18] Authors have updated the analysis with data as of early 2021. **Note:** None = No coverage. Emergency-only = Coverage for pain relief under defined emergency situations. Limited = Coverage for a subset of diagnostic, preventive, and minor restorative procedures with a per-enrollee annual maximum expenditure of $1,000 or less. Extensive = Coverage for a more comprehensive mix of services, including at least 100 diagnostic, preventive, and restorative procedures, and a per-enrollee annual maximum expenditure of at least $1,000.

Even in states that offer dental coverage for adults, there are limits on the covered services or caps on the amount of care enrollees can receive. Limited coverage may focus on prevention or emergency care, but does little to restore and/or maintain oral health for Medicaid enrollees to prevent more severe and costly oral disease. States' decisions not to offer meaningful dental coverage are usually based on fiscal considerations that overlook potential cost savings, and oral health benefits have historically been cut in tight budget years. Dental benefits for adults have neither been considered a "mandatory service" within Medicaid nor an "essential health benefit" under the Affordable Care Act.[21]

Estimating the Cost to Provide Extensive Adult Dental Coverage in Medicaid in all States

We estimated the cost of providing adult dental coverage in all state Medicaid programs. This involved estimating the impact of adding extensive adult dental coverage in the 28 state Medicaid programs that currently provide either no coverage, emergency-only coverage, or limited coverage. We estimated the increased dental care costs as well as the offsetting medical care cost savings from diabetes, heart disease, and pregnancy – three conditions for which there is reasonable evidence linking improved access to dental care with medical cost savings. We estimated both the federal and state government shares of spending. Due to data constraints, we were not able to estimate the cost savings from reductions in emergency department use for dental conditions. Thus, our analysis is conservative, erring on overestimating the net cost. The detailed methodology is in Appendix A. We summarize the key findings here.

Across all 28 state Medicaid programs, the net cost of providing extensive dental coverage to adults is $836 million per year. This includes an estimated $1.1 billion per year in dental care costs and $273 million per year in medical care savings. (Table 1).

Detailed state-by-state estimates are available in Appendix B. For example, the estimated annual state share of new dental care spending that would be required to introduce an extensive adult dental benefit in Medicaid ranges from $525,511 (South Dakota) to $51,617,933 (Pennsylvania), with an average of $14,338,362. The state share of reduction in annual medical care costs range from $111,816 (Wyoming) to $17,020,266 (Texas), with an average of $3,589,406. The net annual cost to a state of adding an extensive benefit ranges from $255,095 (Missouri) to $46,252,487 (Pennsylvania), with an average of $10,748,957.

Table 1: Estimated Additional Cost of Providing Extensive Medicaid Adult Dental Benefits in All States

	Dental care spending	Medical care savings	Net cost
State share	$401,474,150	$100,503,357	$300,970,792
Federal share	$707,533,813	$172,623,476	$534,910,337
Total	**$1,109,007,963**	**$273,126,834**	**$835,881,130**
Per enrollee per month	**$6.16**	**$1.52**	**$4.64**

Note: Table reflects net cost estimates for 28 states combined that currently have no, emergency-only, or limited adult Medicaid dental benefits. Estimates are annual. Due to data constraints, estimates do not include expected reductions in emergency department spending for dental conditions. See Appendix A for full methodology.

From Analysis to Action

Improving Medicaid adult dental coverage is a sound investment in health, economic opportunity, and racial equity. If all states were to provide extensive dental benefits, we would overcome some of the enormous barriers that low-income adults currently face. Under the current landscape, basic access to dental care is generally higher in states with more comprehensive Medicaid dental benefits. Therefore, a person's oral health – and thus overall health and economic opportunity – is dependent upon where they live.

The fact that Medicaid adult dental coverage remains optional for states exacerbates deep racial and geographic disparities in access to oral health care and oral health outcomes. It also perpetuates inequities in chronic disease prevalence, maternal health, employment opportunity, and economic mobility. The communities most affected by the COVID-19 pandemic also face the highest barriers to accessing the oral health care they need to be healthy and function in their daily lives. Black, Hispanic, and other communities of color, as well as people in rural communities and people with disabilities, stand to benefit most from comprehensive adult dental coverage in Medicaid.

The optional status of Medicaid adult dental coverage means that states can take away these benefits at any time. Medicaid adult dental benefits are often subject to state budget cuts during economic downturns, especially in states with more comprehensive coverage. It also means that states may offer different oral health coverage to people in different eligibility categories, such as pregnant people or people with disabilities. This narrow definition of benefits can be confusing for enrollees and oral health providers, especially when covered services change with state budget fluctuations.

Recommendations

These problems, combined with this research, provide important considerations for federal policy change around oral health coverage in Medicaid. The most straightforward way to address oral health access is through federal policy that makes comprehensive oral health coverage for adults a permanent part of the Medicaid program for all states.

Congress can designate dental services as a mandatory benefit category for all Medicaid-enrolled adults. This statutory policy change would ensure that all states offer comprehensive oral health coverage, eliminating the extreme variation across states. It would also reduce or eliminate the need for states, providers, and enrollees to differentiate between eligibility categories for the purposes of covering dental services. This would further reduce uncertainty for people who may currently only have access to dental care during pregnancy or 60 days postpartum, and may also serve to reduce the state administrative burden of differentiating benefits for separate categories of Medicaid enrollees.

In order to achieve the projected increases in oral health care access, health outcomes, and cost savings in this model, Congress could also consider policy aimed at establishing a baseline of comprehensiveness for adult dental services in Medicaid. Policymakers can amend the current statutory definition of Medicaid dental services to address the full range of oral health conditions, specifying categories of services as necessary. Previous legislation, including the Comprehensive Dental Reform Act of 2015, the Oral Health for Moms Act, and the Mothers and Offspring Mortality and Morbidity Awareness Act, have taken similar approaches in defining oral health coverage for pregnant and adult populations in Medicaid and CHIP. In addition to expanding the statutory definition of

dental services, Congress may also rely on further specification at the regulatory level, which would likely be carried out by the Centers for Medicare and Medicaid Services.

Another important federal policy consideration is bolstering state budgets as states implement oral health coverage. While our research is based on existing Federal Medical Assistance Percentages (FMAP) to determine state and federal costs, Congress could consider increasing the FMAP for states to support comprehensive oral health coverage. Adequate funding of state Medicaid programs is necessary for the successful implementation of a new benefit.

Each of these policy options would make improvements to our current patchwork of Medicaid adult dental coverage, and the most thorough approach would be to implement all three together.

Regardless of what solutions federal policymakers consider, our research shows that they should also take into account the full range of savings that oral health policy change can offer. History shows that state policymakers' fiscal calculations around oral health coverage are often shortsighted, failing to take into account the costs to both governments and patients of untreated dental disease, care sought in emergency departments, and the impact of untreated oral health problems on other chronic conditions. As shown in our model, improving oral health coverage not only improves enrollees' health, but also reduces overall medical care costs. Notably, while limitations in the data meant that our model could not account for potential cost savings associated with reductions in emergency department visits at the state level, existing literature estimates that up to 78 percent of these visits could be diverted to more appropriate care settings and the cost savings could be over $1,200 per visit.[15]

The savings we estimate are therefore likely conservative.

Even without federal action, this research is instructive for states that do not currently provide extensive dental benefits to people who rely on Medicaid. State policymakers can improve their states' Medicaid adult dental benefits, as several have in recent years, and realize these same potential improvements in access to care and medical care cost savings.

This analysis required making several key assumptions that, although guided by the best available evidence and data, are subject to uncertainty. Nevertheless, we feel we have incorporated the best available evidence and data to guide our modeling. The analysis is meant to assist policymakers in assessing the need for and the fiscal impact of ensuring a comprehensive adult dental benefit is available in all state Medicaid programs. The Health Policy Institute, Families USA, and Community Catalyst are eager to work with policymakers on initiatives that will expand access to dental care and promote oral health equity.

About the Authors

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Appendix A

Methods for Estimating the Cost of Comprehensive Adult Dental Coverage in Medicaid Programs in All States

Baseline Adult Dental Benefit, Dental Care Use Rate, and Estimated Total Dental Care Costs by State

We utilized previously published classifications of each state's Medicaid adult dental benefit: none, emergency-only, limited, or extensive.[18] Emergency-only states cover pain relief under defined emergency situations. Limited states cover a subset of diagnostic, preventive, and minor restorative procedures with a per-enrollee annual maximum expenditure of $1,000 or less. Extensive states cover a more comprehensive mix of services, including at least 100 diagnostic, preventive, and restorative procedures, and a per-enrollee annual maximum expenditure of at least $1,000.[18]

Classifications from 2018 were used for baseline.[22] For the current benefit classifications, we updated the classification for states that underwent changes to their benefits packages since the most recent publication (2019), including Alaska, Virginia, and West Virginia, which have or will have extensive benefits in place in 2021. This also included Delaware, which now has a limited benefit. In this research brief, we focus our modeling on the 28 states with no, emergency-only, or limited Medicaid adult dental benefits. Utah is excluded from our analysis for data reasons mentioned below.

We relied on Medicaid de-identified claims data from the Transformed Medicaid Statistical Information System (T-MSIS), maintained by the U.S. Centers for Medicare and Medicaid Services (CMS), to assess utilization of and expenditures for dental services among Medicaid-enrolled adults.[23] Since 2014, states have provided T-MSIS detailed information regarding Medicaid and CHIP enrollment, service utilization, and payments. As of 2018, all states and the District of Columbia provide T-MSIS with claims data on a monthly basis. The most recent year of T-MSIS data available is from 2018. Thus, 2018 was selected to calculate baseline utilization and expenditures. Dental claims are contained in the other services (OT) claims tables, one of the T-MSIS Analytic Files (TAFs) housed in the Chronic Condition Warehouse (CCW).[24] This research is part of a data use agreement (DUA) approved by CMS (DUA RSCH-2020-5563: "The State of Oral Healthcare Use, Quality and Spending: Findings from Medicaid and CHIP Programs").

We extracted all dental procedure codes that appear in the American Dental Association's Codes on Dental Procedures and Nomenclature (CDT) manual from the 2018 T-MSIS OT Medicaid tables.[25] For each state, we measured dental care utilization as the proportion of enrolled individuals who had at least one dental claim in the year. Specifically, to produce a state-level utilization rate, we compared the number of enrollees age 21 and over who were enrolled for 365 days and had any dental claim in the year to the total number of adult Medicaid enrollees who were enrolled for 365 days. Dental visits that took place in an emergency department were not included. We used the claim type indicator variable from the OT header table to differentiate between managed care and fee-for-service (FFS) claims; payment data is available for FFS claims, but not managed care claims. We aggregated the FFS payments for dental services for all enrollees age 21 and over by state and calculated the average annual expenditure per dental patient (adult with any dental claim in the year).

There is no baseline expenditure data available for Utah because all dental services are paid for under managed care and not reported in T-MSIS, which inhibits its inclusion in the modeling. Therefore, Utah is excluded from our analysis.

We obtained Medicaid enrollment figures from CMS.[26] These data provide monthly enrollment by state, including total Medicaid and CHIP enrollment and total Medicaid and CHIP child enrollment. We used data from December 2018 for baseline and August 2020 (the most recently available final enrollment figures) for post-reform enrollment projections. For most states, we estimated Medicaid adult enrollment by subtracting the child enrollment from the total enrollment. Child enrollment data were missing for Tennessee in 2018 and for Arizona in 2018 and 2020. To address this data shortcoming, we used CMS-416 data for 2018 and 2019, the most recent available, as the source for child enrollment estimates for Arizona and Tennessee. We then subtracted that estimate from total enrollment to reach adult enrollment.[27]

Baseline Dental Care Use and Per Patient Spending by Classification of Adult Dental Benefit

To estimate the additional cost to the Medicaid program of introducing "extensive" adult dental benefits, we estimated how many Medicaid adult enrollees would use dental care services in a given year after an adult dental benefit is introduced and how much, on average, would be spent on each dental care patient. An "extensive" Medicaid adult dental benefit is defined as a benefit that covers 100 or more dental procedures and has an annual benefit maximum at or above $1,000 per patient per year.[18] We recognize there are significant drawbacks to this simplistic definition, but there is not an alternative definition that has been published in the literature.

Evidence indicates that when adults covered by Medicaid have dental coverage newly available to them, there is an increase in dental care use.[8,28,29,30] This may occur through the enhancement of an existing adult dental benefit (such as from limited to extensive) or when additional adults become eligible for Medicaid (such as through income eligibility with Medicaid expansion). Research has shown that the rate of dental care use increases in the range of 6-10 percentage points within one year of implementation of extensive benefits.[8,28,29] Adults with more generous benefits packages are more likely to use dental care.[31]

In our analysis, we assumed that the change in utilization in any given state will be dependent on the degree of benefit change with the implementation of an extensive benefit. In other words, we predict there will be a greater increase in utilization in states that currently have no adult dental benefit and implement an extensive benefit, compared to states that currently have a limited benefit that is enhanced to be comprehensive. In Appendix A Table 1, we calculated the average dental care utilization rate among Medicaid-enrolled adults by adult dental benefit type. The mean utilization at baseline for all states with no adult dental benefit 0.9% percent, the mean utilization at baseline for all states with an emergency-only adult dental benefit is 9.2 percent, and the mean utilization at baseline for all states with a limited adult dental benefit is 21.8 percent. We compared the average utilization for each of the no benefit, emergency-only benefit, and limited benefit groups to the average utilization in states with an extensive benefit.

Appendix A, Table 1: Utilization, Expenditures by Type of Adult Medicaid Dental Benefit

Adult Dental Benefit Classification at Baseline	Number of States	Average Baseline Utilization	Utilization Difference Compared to Extensive	Average Annual Expenditures Per Patient
None	3	0.9%	27.5%	$784
Emergency	13	9.2%	19.2%	$445
Limited	16	21.8%	6.5%	$281
Extensive	19	28.4%	--	$437

Source: Health Policy Institute analysis of data obtained from the Transformed Medicaid Statistical Information System (T-MSIS), maintained by the U.S. Centers for Medicare and Medicaid Services (CMS).

The average percentage of Medicaid adults with a dental visit in a year across extensive states in 2018 was 28.4 percent. We used these differences (none vs. extensive, emergency-only vs. extensive, limited vs. extensive) to calculate the state-specific increase in utilization with the implementation of an extensive benefit based on its baseline utilization. We added 27.5 percent to the baseline dental care utilization rate for states without an adult dental benefit (including New Hampshire, where the dental benefit is under development), 19.2 percent for states with an emergency-only benefit, and 6.5 percent for states with an existing limited adult dental benefit.

We used a single estimate for dental expenditures per dental patient following the implementation of an extensive adult dental benefit based on analysis of T-MSIS data. We used the average total dental expenditure paid by Medicaid among Medicaid-enrolled adults with a dental visit within the year, averaged across states that provided an extensive adult dental benefit in Medicaid in 2018. This yielded an average expenditure level of $437 per dental care patient per year. We assumed that all expenditures related to implementing an extensive adult dental benefit are paid for by the Medicaid program; we did not account for the possibility of patient copays or coinsurance.

In summary, to calculate the total incremental expenditure of implementing an extensive Medicaid adult dental benefit, we used the following formula for each state:

*Expenditure = Enrollment * Utilization Rate * Spending Per User*

Post-Reform Projected Dental Care Use and Dental Care Spending

To determine the federal and state shares of the estimated Medicaid expenditures, we used the most recent (fiscal year 2021) federal medical assistance percentage (FMAP) for Medicaid.[32]

In states that have expanded Medicaid eligibility, a greater share of the cost of services for the expansion population is paid by the federal government. We did not factor this into the state and federal shares and recognize this as a potential shortcoming. However, given this adjustment, Medicaid expansion states would see a lower share of expenditures attributed to their state budgets.

Post-Reform Estimated Reduction in Medical Care Costs

We estimated medical care cost reductions associated with increased access to dental care for adult Medicaid enrollees. There is emerging evidence that increased access to dental care can lead to lower health care costs among pregnant patients and patients with chronic conditions such as diabetes and heart disease.[16,17]

Medical Care Cost Savings: Emergency Department Visits

The national average cost of an emergency department (ED) visit for a dental condition is $1,286.[33] The available evidence suggests that up to 78 percent of ED visits for dental conditions nationwide could be diverted to a dentist office or other ambulatory setting.[34] A recent study demonstrated a 14 percent reduction in dental-related ED visits one year after expanding dental benefits via Medicaid expansion.[28]

For methodological reasons, we did not include in this analysis the savings from reductions in ED use for dental conditions. The costs for dental-related ED visits are not included in the baseline dental spending due to the construction of these expenses in the T-MSIS dataset. Therefore, we did not model the offsets. Thus, our baseline spending is an underestimate in terms of total dental care spending without the inclusion of ED associated costs of dental care. However, additional savings would be projected due to the diversion of ED-based dental care to more cost-effective and clinically appropriate settings when adult enrollees have an extensive adult dental benefit.[14,15,34]

Medical Care Cost Savings: Diabetes and Coronary Artery Disease

We estimated the number of Medicaid enrollees in each state who have diabetes and coronary artery disease based on the share nationally of adult Medicaid enrollees who have these health conditions. In the most recent year reported (2018), 11.4 percent of Medicaid enrollees nationwide self-reported they had diabetes and 3 percent reported they had coronary artery disease.[35] We applied the national rates for these chronic conditions among Medicaid enrollees to all states. We assumed adults with these conditions will behave similarly in terms of their dental care seeking behavior when an extensive dental benefit for adults is introduced. In other words, their dental care utilization rate will increase by the same amount as adult enrollees in general.

We assumed that 60 percent of adult Medicaid enrollees have some form of periodontal disease. This estimate is based on the most recent national data on the prevalence of periodontal disease among low-income adults in the U.S.[36] This 60 percent estimate also applies to pregnant enrollees.[37]

Based on the available evidence, estimated medical costs would be reduced between $900[17] and $2,840[16] per patient with diabetes who receives periodontal treatment. We used the lower end of this range and assumed a medical care cost reduction of $900 per year for each new dental patient with diabetes once in a “steady state.” The available evidence suggests that medical cost savings among adults with coronary artery disease who receive periodontal treatment are $1,090[16] per year.

Medical Care Cost Savings: Pregnancy

We utilized the most recently available (2018) state-level data on the number of births among Medicaid,[38] but subtracted the number of teen births by state.[39] Approximately 77.5 percent of teen births nationally are paid for by Medicaid,[38] so that share of 2018 teen births were subtracted from each states’ total overall births to produce an approximate number of pregnancies in Medicaid in each state. We assumed that pregnant enrollees will behave similarly in terms of their dental care seeking behavior when a dental benefit for adults is introduced into Medicaid, meaning their utilization rate will increase by the same amount as other adult enrollees.

Based on the available evidence, the estimated medical cost savings are between $1,500 (second pregnancy) and $2,400 (first pregnancy) per year per pregnant woman receiving periodontal treatment.[16] For our modeling, we chose the low end of this range and assumed a medical cost reduction of $1,500 per year per pregnant enrollee.

In summary, the medical care spending offsets for these various conditions is estimated using the following formula:

*Medical Care Offset = Enrollees * Change in Utilization Rate * Share of Enrollees with Condition * Share with Condition with Periodontal Disease * Medical Care Costs*

Similar to the new dental care costs, we used the FMAP to distribute these medical care cost offsets across state and federal budgets.

Cost of Adding an Extensive Dental Benefit by State

The impact of introducing comprehensive adult dental benefits in Medicaid, particularly the medical cost savings, is not immediate. There is very little research to draw on to predict when these costs and savings would be realized following the implementation of comprehensive benefits and how long this takes in practice. Enrollees become aware of the benefit gradually, providers need time to adjust,[40] and medical care cost reductions are not realized immediately. For simplification purposes, our analysis does not account for these time lags. Rather, it is best interpreted as “steady state” estimate, likely to be most accurate over a two to five-year timeframe.

Appendix B

Estimated Cost of Comprehensive Adult Dental Coverage in Medicaid Programs in All States without an Extensive Benefit

	Baseline dental benefit for adults	Adult Medicaid enrollment	Baseline dental care utilization rate	Projected dental care utilization rate	Additional dental care spending	Additional medical care savings	Net cost	Net Cost per enrollee per month	State share of net cost
Alabama	None	283,788	0.1%	27.6%	$34,124,292	$12,782,664	$21,341,628	$6.27	27.6%
Maryland	None	759,189	13.3%	40.8%	$57,275,116	$23,521,013	$33,754,102	$3.71	50.0%
Tennessee	None	667,145	1.3%	28.8%	$77,896,427	$23,536,106	$54,360,321	$6.79	33.6%
New Hampshire	Under Development	105,181	7.5%	35.0%	$13,778,918	$3,048,687	$10,730,231	$8.50	50.0%
Arizona	Emergency	933,564	4.4%	23.6%	$93,699,447	$21,444,043	$72,255,404	$6.45	30.0%
Florida	Emergency	1,372,790	8.8%	28.0%	$97,020,830	$38,916,328	$58,104,502	$3.53	39.0%
Georgia	Emergency	604,272	9.6%	28.8%	$53,774,304	$18,686,512	$35,087,793	$4.84	33.2%
Maine	Emergency	127,662	10.7%	29.9%	$12,226,687	$2,763,428	$9,463,259	$6.18	36.0%
Mississippi	Emergency	211,101	11.4%	30.6%	$20,182,841	$6,940,708	$13,242,133	$5.23	21.7%
Nevada	Emergency	389,234	18.9%	38.1%	$21,691,113	$8,732,803	$12,958,309	$2.77	37.4%
Oklahoma	Emergency	259,116	9.2%	28.4%	$25,661,338	$8,052,508	$17,608,830	$5.66	31.7%
Texas	Emergency	997,541	5.3%	24.5%	$78,362,115	$43,419,045	$34,943,070	$2.92	39.2%
Arkansas	Limited	467,719	9.8%	16.3%	$24,152,533	$3,323,919	$20,828,614	$3.71	28.4%
Delaware	Limited	134,263	1.1%	7.6%	$3,142,452	$969,724	$2,172,729	$1.35	42.3%
Hawaii	Limited	214,504	8.1%	14.6%	$9,236,674	$1,423,569	$7,813,105	$3.04	46.4%
Indiana	Limited	813,254	26.6%	33.1%	$42,446,948	$6,040,819	$36,406,130	$3.73	33.7%
Kansas	Limited	124,954	17.0%	23.5%	$7,655,024	$1,241,970	$6,413,054	$4.28	39.8%
Kentucky	Limited	908,740	18.5%	25.0%	$68,802,428	$6,151,205	$62,651,223	$5.75	27.3%
Louisiana	Limited	886,412	14.1%	20.6%	$76,783,758	$6,736,875	$70,046,882	$6.59	32.0%
Michigan	Limited	1,529,074	26.1%	32.6%	$119,011,070	$10,586,689	$108,424,381	$5.91	34.5%
Minnesota	Limited	563,718	36.6%	43.1%	$18,673,023	$4,171,782	$14,501,241	$2.14	49.5%
Missouri	Limited	365,003	16.7%	23.2%	$4,129,885	$3,371,576	$758,309	$0.17	33.6%
Nebraska	Limited	91,781	37.0%	43.5%	$9,359,136	$951,469	$8,407,667	$7.63	42.2%
Pennsylvania	Limited	1,692,591	26.2%	32.7%	$109,082,699	$11,338,645	$97,744,055	$4.81	47.3%
South Carolina	Limited	417,513	14.1%	20.6%	$21,430,923	$3,696,485	$17,734,438	$3.54	29.3%
South Dakota	Limited	34,359	29.8%	36.3%	$1,272,115	$381,959	$890,156	$2.16	41.3%
Vermont	Limited	102,203	29.8%	36.3%	$6,673,414	$672,672	$6,000,743	$4.89	43.5%
Wyoming	Limited	21,160	20.2%	26.7%	$1,462,452	$223,631	$1,238,821	$4.88	50.0%

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